Report of the third Sinana woreda Strategic Innovation Platform Meeting, 30 June 2015



|  |  |
| --- | --- |
| Produced by | International Livestock Research Institute |
| Published by | International Livestock Research Institute |
| June 2015 | |

[www.africa-rising.net](http://www.africa-rising.net)



The Africa Research in Sustainable Intensification for the Next Generation (Africa RISING) program comprises three research-for-development projects supported by the United States Agency for International Development as part of the U.S. government’s Feed the Future (FtF) initiative.

Through action research and development partnerships, Africa RISING will create opportunities for smallholder farm households to move out of hunger and poverty through sustainably intensified farming systems that improve food, nutrition, and income security, particularly for women and children, and conserve or enhance the natural resource base.

The three projects are led by the International Livestock Research Institute (in the Ethiopian Highlands) and the International Institute of Tropical Agriculture (in West Africa and East and Southern Africa). The International Food Policy Research Institute leads an associated project on monitoring, evaluation, and impact assessment.

|  |
| --- |
| by-nc-sa This document is licensed for use under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 Unported License  AR_Global_partners.jpg  This document was made possible with support from the American people delivered through the United States Agency for International Development (USAID) as part of the US Government’s Feed the Future Initiative. The contents are the responsibility of the producing organization and do not necessarily reflect the opinion of USAID or the U.S. Government  Table of Contents  [Introduction 4](#_Toc427693803)  [Sinana Woreda 3rd Strategic IP meeting 5](#_Toc427693804)  [Welcoming participants and opening remarks 5](#_Toc427693805)  [Africa RISING Research activity’s update and some Findings at Sinana woreda 7](#_Toc427693806)  [ICRISAT-Africa RISING protocols 9](#_Toc427693807)  [Discussion through questions and answers: 10](#_Toc427693808)  [CIP-Africa RISING Protocols: 12](#_Toc427693809)  [Crop and Livestock Value chain assessment findings and Proposed Interventions 15](#_Toc427693810)  [ICARDA and CIMMYT-Africa RISING Protocols 17](#_Toc427693811)  [Discussion pointes raised through question and answer on CIP, CIAT, and ICARDA/CIMMTY Presentation 19](#_Toc427693812)  [ICRAF-Africa RISING Protocols 21](#_Toc427693813)  [IWMI and ILRI- Africa RISING protocols 22](#_Toc427693814)  [Discussion pointes raised through question and answer on CIP, CIAT ICARDA/CIMMTY presentations 24](#_Toc427693815)  [Annexes 27](#_Toc427693816)  [Annex 1: Participatory Cropping Calendar 27](#_Toc427693817)  [Annex 2: Agenda for sinana woreda 3nd Strategic IP meeting 28](#_Toc427693818)  [Annex 2: List of participants of 3nd Strategic IP meeting at Sinana, Bale Robe 30](#_Toc427693819) |

# Introduction

[Africa RISING in Ethiopian highlands](http://africa-rising.net/where-we-work/ethiopian-highlands/) is a research for development project that focus on **s**ystem interventions in the crop-and-livestock mixed farming system in four big regions (Amhara, Oromia, Tigray and SNNPR). The project understands the need for engaging various research and development partners in addressing system interventions. For this the project established and support innovation platforms at field sites for cooperation and co-learning**.** The platforms are supported to facilitate meaningful and effective interactions that prioritize, guide, and evaluate the various research and development processes specific to the sites. The platforms started helping connect farmers to profitable and efficient value chains for the main commodities. The members of the platforms are contributing in designing, implementing, evaluating project activities and disseminate and communicate research findings though regular meetings and farmers field days.

Innovation platforms and farmer research groupsInnovation platforms (IPs) have been formed at all the research sites. The platforms aim to nurture linkages among farming communities, the Africa RISING research teams and other public and private actors working in the areas. They work at three levels:

1. At woreda (district) level, strategic IPs support kebele platforms and farmer research groups. They bring together stakeholders to support wider adoption of innovations.
2. At kebele level, operational platforms oversee local research activities, foster integration among the farmer research groups, and promote alignment of local on-farm research with district priorities.
3. Farmer research groups are like innovation clusters. They involve all farmers who are active around specific clusters of research activities – such as forage production, water delivery or varietal improvement. The roles of these groups are expected to expand to promote scaling of innovation to wider groups of farmers.

General assembly IP meetings will organized once in a year in order to communicate research idea, result, and a proposal review and woreda/kebele IP meeting will held at any required time with the IP TGs as activities are going to be implemented prior to implementation. This 3rd strategic IP meeting was conducted at Bale Robe, Sinana site with the objectives of communicating and sharing research result and bringing CG partners together to share their research agenda to local partners in order to get feedback for suitability of their research idea prior to implementation.

# Sinana Woreda 3rd Strategic IP meeting

**Venue: Bale Robe Zonal Administration Office**

Participants from CGIAR centers:

* Anna Kimeu (CIAT-Kenya)
* Kalphana Sharma (CIP)
* Yetsedaw Ayenew (ICARDA)
* Tesema Tamirat (IWMI)
* Abera Edie (ILRI)
* Elias Damtew (ILRI)
* Apollo Habtamu (ILRI)
* Ketema Alemu (ICRISAT)

Facilitator –Ahmed Aliye (Mada Walabu University)

Minute takers: Endeshaw Tadesse/ILRI, Shure Soboka/SARC and Abdulnasir Yunus/MWU

**Objectives of the meeting:**

* The meeting was organized for learning and sharing through communicating research findings undertaken in Sinana woreda among partners and presenting new research protocols to capture feedbacks and building comments for easiness of the work.
* To share roles and responsibilities among platform members for scaling out/up of innovations from last year interventions by Africa RISING and its partners and integrating the new research idea to the right place and the right time for the identified gap during interventions.
* To discuss on the appropriateness of the new research protocols to be implemented in the coming main cropping season (by taking the local conditions into account), collecting feedbacks and comments,
* To disseminate the reports of the activities implemented so far by Africa RISING Sinana site and its partners.

# Welcoming participants and opening remarks

# 

The meeting was started welcoming the participants with brief insight into the day agenda by the site coordinator. Addisu mentioned in his speech that the 3rd IPs meeting is the first of its kind organized with the objective to share the new research protocols by the protocol owners and collecting feedbacks from stakeholders before implementation, discussing on appropriate farmer selection criterions and producing participatory cropping calendar. He also pointed out in his speech that the last year research implementation strategy had some drawbacks. In contrary to this, all research protocols were directly presented to the local farmers with the presence of key local partners, woreda IPTGs and few research protocol owners from CG centers with little or no room for suggestion/comment as such and interested farmers fulfilling our selection criteria were requested to register on each research protocols. Later on, a lot of problems were reported and by taking lesson from last year, this approach was designed as a best implementation strategy. He also addressed in his speech that the meeting aims to communicate the progress of the Africa RISING supported research activities in Sinana Woreda and share findings to stakeholders with the opportunity of bringing different partners and stockholders together to this golden floor where different new research protocols are going to presented through providing us a chance to evaluate and give valuable ideas, comments, suggestion on the suitability of the protocols. Beside to this, he was tried to address the purpose of the meeting to the partners and point out that it is mainly focusing on research activities that were under taken by Africa RISING at the grass root level at Sinana woreda so far and participatory method of evaluating different protocol before implementing. In addition to this, he was also made a remark on the importance of IP and its function in addressing the issue of sustainable intensification and good opportunity for different partners and stockholders to point out the challenge and gap that was found in the real environment we are working in and put solution all together for better performance. Finally, he encouraged active participation by all IP members and invited guest of honor to give opening remarks and officially open the meeting.

­

*Photo 1: welcoming participant (Apollo H/ILRI)*

The Zonal office of agriculture vice head, Ato Alemu Lema, made an opening remarks addressing the importance of IPs for the partners and platform members in sharing and learning from research evidences generated. He pointed out that, this is a good opportunity for Sinana Woreda as well as to all of us being part of this project. He acknowledged invitation made to him to be part of the field visit organized by Africa RISING Sinana Site team a day before. He explained his personal excitement with the technology introduced by this project for small scale farmers that are economically feasible and ecofriendly in changing their livelihood. He also pointed out that, today we are here for something not for nothing, by representing different organization as an innovation plat form member to stand side of this project to bring economically as well as socially feasible changes in the community through best bet technology transfer and contributing our part in it. Finally, he encouraged active participation of participants to contribute for the fruitfulness of the meeting and announced official opening of the day meeting floor.

Ahmed Aliye from Madda Walabu University was facilitating the whole day meeting and he introduced the day agenda and invited all participants to speed networking. All participants started to communicate to the person near to each other and introduced themselves looking for new faces. It was fun and ice breaker for all participants to start the meeting.



Photo 2: Ato Alemu Lema making an opening speech (left) and Ahmed (right) inviting participants to make speed networking (Apollo/ILRI)

# Africa RISING Research activity’s update and some Findings at Sinana woreda

The progress of Africa RISING research activities in Sinana woreda was briefly presented by the site coordinator. Addisu clearly presented the activity performed last year specially by focusing on the nine crop and livestock research protocols implemented in two Kebeles by Africa RISING and its partners. In his presentation, he summarized the number of farmers participated in both kebeles in each research activities. He shared the status of each research activities and also challenges faced during the implementation of the research activities. The capacity building activities, master student sponsored and other different activities accomplished by Africa RISING project were also shared. Opportunities and lessons learn were also presented by Addisu.



*Photo 3: Presenting project update by Sinana site coordinator (Apollo/ILRI)*

The site coordinator gave a very brief introductory points about the Africa RISING project that is being undertaken. He tried to address the progress of the project activities since 2012. He touched the main activities conducted year by year and the project status currently in the community focusing on major activities like diagnostic survey, site selection and potential partner identification as a first year project activities whereas strengthening manpower, partnership and on farm research, developing seven research component and 33 research protocols were the second year activities. Among 33 research protocols developed for Ethiopian High lands, the project implemented more than 9 crop and livestock research protocols in Sinana Site in 2014. He also described that currently, the project bring great change that has been seen at grass root level especially on potato production, creating interest in the community, around 22 farmers grouped themselves and requesting for potato seed of 75 quintals by their own cost. In addition to this, he explained the research results on crop in 2014 cropping season, tree Lucerne survival rate at both Keble, post-harvest management (6 big DLS and 10 small constructed, triple bags), community seed produced (more than 300 qts of potato, 28 qts of wheat, 18 qts of F.bean and 24 qts of field pea), technology to be introduced especially on irrigation and other undergoing activities.

Highlighted challenges

* Communication problems
* Frequent partners staff turn over
* Assuming ILRI/Africa RISING as a development NGO
* Mono-cropping and Mechanization

About 60 participants from zone, woreda and AGP, DAs, representative farmers including chairman of the two kebeles from the two kebele operational IPs participated on the meeting. The different Africa RISING research protocols were presented by **r**esearchers from ILRI, CIP, ICRAF, ICARDA, IWMI and ICRISAT. Very hot and fruitful discussion was made among the participants on each protocols. Crops and livestock value chain assessment results and possible interventions was also presented by Annah Kimeu (CIAT-Kenya). Finally, the IPs refined and approved all of the protocols, consensus was reached on selection criterions set for each protocols among participants and participatory cropping calendar was produced for both PAs. Discussion points, queries, comments and suggestions along with each protocols were documented as follows:

# ICRISAT-Africa RISING protocols

The following three ICRISAT-Africa RISING research protocols were presented by Ato Ketema.

1. Reaching wider communities with Stratified, Land Quality based Fertilizer Recommendation in Ethiopia: evidence for policy influence
2. Farm-typology based Interventions for Improved Nutrition, Income and Resilience in Africa RISING sites, Ethiopia
3. Chickpea Interventions for Intensification of Crop-livestock Systems of Ethiopia, Field crops varietal selection and management.

Ato ketema, tried to touch the need for testing fertilizer with stratified and land quality recommendation of fertilizers. He presented that crop response to fertilizer rate is diverse and variable across site and it is not economical to use blind recommendation on different sites because the recommended amount and combination of fertilizer will be much higher than the crop requirement under production causing resource expenditure on small scale farming community. As a result it’s required to test fertilizer on stratified soil to get clue about the need for a stratified crop-response trial, so that farmers will have the possibility to use the right amount and types of fertilizer to apply in their farm niches in different landscape positions and to make soil type based fertilizer recommendation beyond crop-based recommendation. Last year this trial was conducted on 17 farmer’s field and however it was not representative of the soil cluster and impossible to give single recommendations. This year it is going to be implemented on 45 farmers plot under three major land categories.

*Photo 4: Ato Ketema Alemu, presenting ICRISAT protocols*

Finally, the research output will be fertilizer recommendation for policy influence, efficient and economical use of fertilizer for better yield based on cropping system that in turn improve food security and income.

In addition to this, Ketam also presented the second and the third protocols which includes farm-typology based recommendations in cropping mixtures to address household nutrition and income through targeted technologies and practices and chickpea interventions for intensification of crop-livestock systems of Ethiopia to reduce the load of unidentified fungal disease on Faba bean that cause total loss of the crop yield. Following his presentation, participant were reacted on the presented protocols accordingly.

# Discussion through questions and answers:

Questions and comments raised on Project update and ICRISAT Protocol presented:

**Q1**. Africa RISING did human nutrition survey on 12 HHs a week before. Why it is important to conduct nutrition survey once again? Is there any difference or is there especial output expected to come at the end?

**Ans**. The main objective is to estimate the level of malnutrition (Particularly in children) in terms of energy, protein, vitamins and micronutrients in the various Parts of the study sites and Based on the output of the study, to capacitate the farm level through training and show teach. But I’m not sure the similarities and difference between the nutrition survey and this one because I’m not the person who initiated the proposal.

Q2. It seems that there is overlap of soil fertility trials because SARC did around 20 site specific fertilizer/soil tests and summited to ATA for declaring recommendation. ATA itself is also producing soil fertility map for different regions of Ethiopia including Oromia. Have you consulted ATA before developing this research protocol?

Ans. actually we also follow and communicate with ATA during commencing this type of soil/fertilizer trials and our research output will be used as an input for them.

Q3. Does fertilizer/soil fertility is the priority for sinana or what is the base of your study?

Ans. Research done at different time and different countries implies that the crop need for fertilizer and the amount we are using is either below or beyond the need of the crop and is not economical and sound for our farmers.

*Discussion points captured:*



*Photo 5: Different photos of the meeting showing reflection from participants and discussion part in the morning session (Apollo/ILRI)*

**Q4**. Does this fertilizer trial is related with Physiological parameters such as resistant to loading, resistance to disease?

**Ans.** Yes, For instance, the use of Magnesium and phosphorus highly decrease the chance of lodging.

**Q5**. Is that Chickpea is appropriate for Sinana because Chickpea is more adapted to low land area than highlands like Sinana?

**Ans**. Productivity is less regarding Chickpea in Sinana woreda. So it is better to test at Basaso, sheneka, selka, Abakara,…. Where high moisture areas are found and it should be planted using residual moisture rather than following

**Q7.** Whatever crop we saw, we use chemical for pests, weeds and etc and finally we use this crop for food, feed and other purpose, what is the rationale behind the use of this chemical because currently farmers are criticizing the chemical due to the fear they have on human and animals health?

**Ans.** This is normally not personal issue; it is the question of the country and every body of us, but the rationale behind using chemical is, it has little effect which is not chronic/ significant on human health and animal health.

**Q8**. How do you determine the water requirement of the crop?

**Q9**. What is your basis to explore this experiment?

**Comments and suggestions**

* Why only chemical fertilizers? Better if compost/organic fertilizer is also included.
* Six woreda’s fertility map was complotted and is in our hand possible to use Aliyyi Kedu
* Soil fertility test before planting
* The objectives of introducing chick pea should be not on the bases of disease rather in other merits of chickpea. Because, we didn’t come across with the newly emerged faba bean disease in Bale (Tadele Tadesse from SARC).
* It is better to do around Shanaka than Selka (check pea).

# CIP-Africa RISING Protocols:

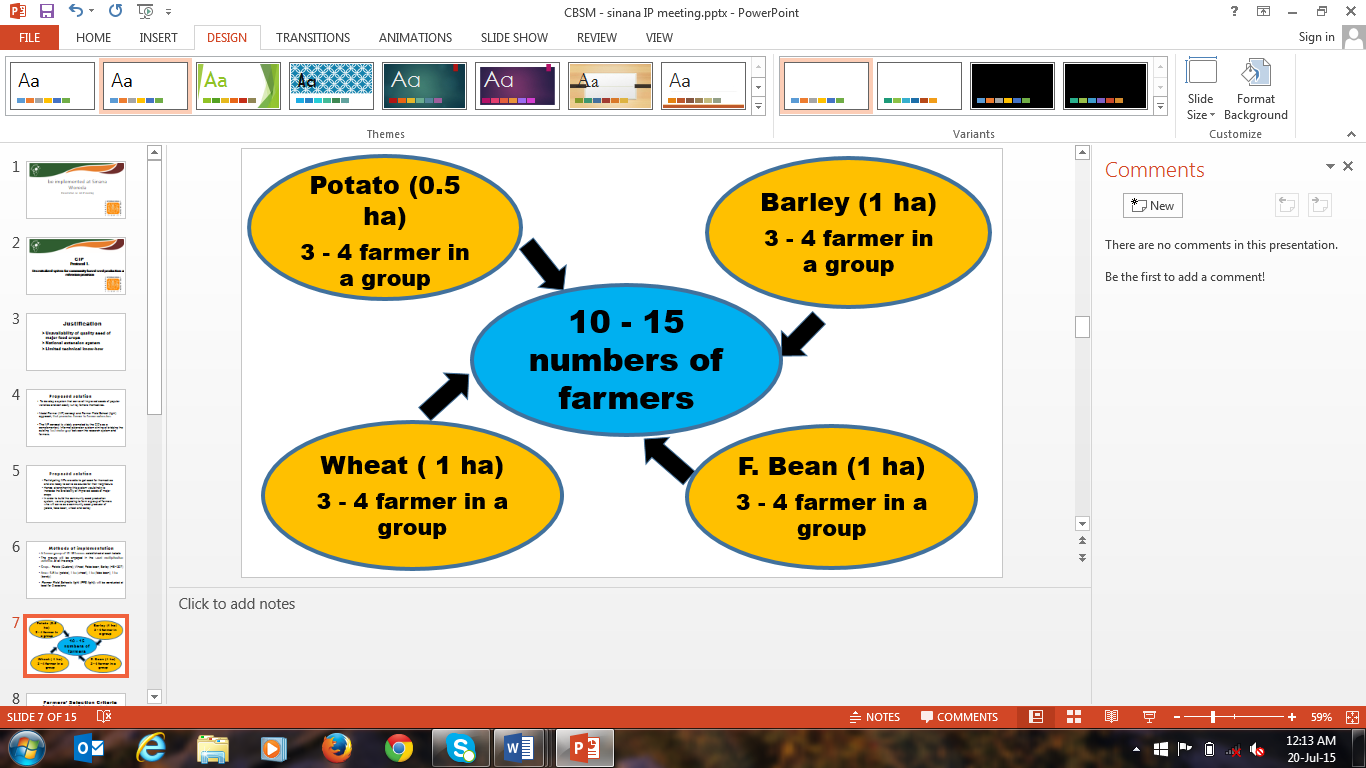
**Protocol 1: Decentralized system for community-based seed production and extension provision**

Kalphana Sharma from CIP presented two protocols entitled Decentralized system for community-based seed production and extension provision and Testing and promotion of appropriate ware faba bean storage technology. In her presentation she covered the research background, methods and expected results. In justification section, she stressed on the problem of lack of improved seed of most of the crops that the farmers are growing, National extension system and knows- how are the major problems of improved seed systems. As a result developing a system that can avail improved seeds of popular varieties and can easily run by famers themselves through Model Farmers Concept and Farmers Field School that promotes farmer-to farmer extension is an important issue.



Photo 6: Dr. Kalphana Sharma presenting CIP-Africa RISING research protocols (Apollo/ILRI)

The presentation was clear, simple and heart touching for all IP members and invited guests since the issue of improved seed availability is the sound of all farmers and farming communities. It was also clear and easy to understand and get the point of the presentation as it was supported by figures; tables. See the following picture on the group of farmers and crops to be multiplied.



**Protocol 2: Testing and promotion of appropriate ware storage technology**

Kalphana also presented another research activity to be implemented on Testing and promotions of appropriate ware storage technology for capacitating local knowledge on post- harvest technology of Faba bean. Post-harvest losses due to poor handling and storage identified as major problem in Africa RISING sites (Value chain study, 2014). In addition to this, price fluctuation, seasonality and inconsistency in the supply of faba bean are other problems affecting the post-harvest handling of faba bean. Therefore, CIP through Africa RISING will going to test appropriate ware storage technology with totaling four farmers per site on 0.15ha of land per HH with trial consisting of five treatments. In her presentation she put clearly the role and responsibility expected from the project and the farmers for both proposals (see table blew)

Triple bag for Faba bean storage and is one among the five treatments to be tested. This post- harvest handling material can easily manage storage pest like weevil, large and small grain borer that can cause huge damage of the product during storage after post-harvest.

|  |  |  |
| --- | --- | --- |
| Project | Farmer | Selection criteria |
| Provide starter seed to be paid back with 10% interest for the establishment of revolving seed system | Provide land and fertilizer | Potato, Faba bean, Wheat, Barely crops working in a group will be selected by IPs OR, |
| Capacity building training to seed procedures, payment of carpenter to construct DLS | Apply all management practices (fertilizer, sprays, weeding, earthing up, de-haulming as per recommendation | Existing cooperative, if any, will receive priority as long as it is willing to involve above mentioned crops, GRAD, |
| Establish /strengthen link between seed producers and buyers | Provide local and factory materials for the construction of DLS | OR, Willing to rent land ,Collaboration with BOAs, AGP,FTC |
|  | Participate in data collection activity, own the produces |  |

# Crop and Livestock Value chain assessment findings and Proposed Interventions

CIAT representative from Kenya, Anna, also presented preliminary research findings on crop and livestock value chain assessment and proposed interventions.



Photo 7: Anna Kimeu (CIAT-Kenya) presenting crop and livestock value chain assessment results (Apollo/ILRI)

The study was initiated with the objectives of identifying and getting an understanding of the role/importance of the value chain and input/service agribusinesses in each of the value chains and market demand and supply of crop and livestock products in and outside the district and suggest potential interventions based on the findings. She explained in her presentation that the study was with crop value chain (wheat, potato and faba bean) and Livestock value chian (Dairy – peri urban (fluid milk, commercial processing), rural (butter) and Large and small ruminants.

Anna presented that the finding of crop value chain indicates the use of wheat straw integrates well in to livestock system-bran and wheat market involves both retailers and wholesalers who sell wheat grains to collectors, final consumers and processors whereas no primary cooperative involvement. In addition to this, faba bean is less developed, there were no faba bean processors except the hotels -full’ and ‘wot’. The processing of faba bean still has some challenges that keep it low scale within hotels mostly. Regarding Potato value chain, in the Sinana district is still young. There are large numbers of wholesalers compared to the other three sites. The surveys also revealed that there was very minimal processing that was done. The major potato actors involved in processing are hotels and restaurants. The hotels and restaurant processors interviewed preferred large sized potato for processing. As far as crop and input constraint is concerned, Anna described that Market and price constraints, Supply problems, low supplies, Storage problems, Market infrastructure, Market information and Poor quality, Quality of inputs, Seasonality of business, Poor varieties, Storage facilities, and Poor supplies of inputs by suppliers, High prices of some seasonal inputs were the major one. Beside this, commercial processing of butter is negligible and traders buy lactic butter from outside the district to serve customers in Sinana with production and sale of lactic butter in the rural areas appears to be very limited-compared to the other sites.

**Possible Intervention**

|  |  |  |  |
| --- | --- | --- | --- |
| Crop | Livestock | LR and SR value chain interventions | General livestock Inputs and services interventions |
| *Establishment of warehouse* | *Fluid milk value chain interventions* | *Consumer demand study for live animals/meat products* | *Explore privatization abattoir services and extend services to small ruminants (Basona example)* |
| *Enhance market linkages among the actors in the value chain.* | *Conduct dairy consumer survey, including product tasting* | *Diversify product range (e.g. younger animals – steer fattening)* | *Assess and improve (quality and quantity) of Oestrus Synchronized Mass Artificial Insemination* |
| *Supply quality seed suitable for processing.* | *Increase role of dairy cafes for sale of milk (shop) and diversified production (butter, ayeb, milk shake)* | *Seasonality creates variations in numbers and prices – more detailed studies on supply/demand during “normal periods” - none fasting/no holidays”* | *Increase demand AIBs for dairy farmers and fatteners, through i) demonstrations and ii) on-farm ratio formulation iii) group bulk purchase* |
| *Improved post-harvest management practices (post harvesting and handling)* | *Explore boiled milk processing for yoghurt in dairy cafes and businesses* | *Contractual linkages between traders/butcheries and producers* | *Increase supply of pulses and wheat by-products through availability studies (farm and district) and improved processing technique* |
| *Seed system (Community seed production)* | *Expand(contractual) linkages between producers and dairy businesses to increase supply of* |  |  |
| *Establishment of warehouse* |  |  |  |
| *Enhance market linkages among the actors in the value chain.* |  |  |  |
| *Establishment of irrigation* |  |  |  |
| *Capacity building intervention for research Centre, seed producer and marketing cooperatives* |  |  |  |
| *Training on how to use farm implements, sensitization and linkages with producers plat forms.* |  |  |  |
| *Improving the linkages of seed producer with seed suppliers’ enterprises and agricultural research centers to get improved seeds.* |  |  |  |
| *Introducing cost effective row planter and seed cleaner.* |  |  |  |
| *identifying the potential buyers of the crop produce and create linkage with the farmers* |  |  |  |

# ICARDA and CIMMYT-Africa RISING Protocols

The protocols were participatory variety selection (ICARDA); testmng echanized options for seeding wheat and upgrading the bed and furrow for relayprot cropping, N management and soil and water conservation (CIMMTY):

Yetsedaw from ICARDA presented on the participatory variety selection for 3 major crops, Wheat, Field pea and lentils. In his presentation he delineated the 2014/15 constraint such as Management of trials (Farmers participation), Data management, workshop were not held on appropriate time, and Weak link between stake holders (IP) as a major problems. Among the presented protocols Utuba, Mangudo, Ude, Yerer, Ginchi was Durum wheat varities,  Chekol,  Alem Tena,  Derash, Alemaya, Dembi among lentil varities and Bilalo, Megeri, Markos, Gume, Burkitu among field pea varities. In his presentation, Yetsedaw was clearly described all required inputs, level of management methodologies and agronomic data to be collected in collaboration with Research centers, farmers, universities and other woreda and keble development agents as an IP members and partners. It was a good center of discussion and opportunities for participant to react on verities proposed especially SARC on durum wheat verities proposed since sinana had been released about nine durum wheat varieties so far and good opportunities to compare them with proposed varieties. Regarding lentil varieties, participant was forwarded their matured idea based on the experienced agro-ecology and trend. Lentil may not perform well since sinana is almost highland and lentil requires lowland areas around Ginnir. Finally, they convinced that since it’s a part of trials it’s better to test and wait for the result.



Photo 8: Yetsedaw Ayinewa presenting ICARDA and CIMMYT research protocols (Apollo/ILRI)

Beside to this, Yetsedaw also presented two CIMMTY protocols upgrading the bed-and-furrow system for relay cropping, N management, and soil and water conservation and Testing of mechanized options for seeding wheat. He described that the trial was initiated to see the effect of improved fertilization with normal fertilization, effect of relay cropping with different legumes and furrow, bed and flatbed planting. The second protocols is also designed to give chance to the farmers to run their farming activities from manual/traditional to mechanized planting in order to save their time, energy and resource. It was motivating and participant was appreciated the technology.

**Summary of ICARDA Participatory variety selection protocols**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Activities | Trt | Plot size | Location | No. farmers | Farmer Selection Criteria |
| Participatory Variety Selection of Durum wheat | Five (Denbi, Hitosa,Ude, Yerer and Ginchi) | 5\*5 | Sinana, Lemo, Endamehoni and Basona Worana | Four (two in each kebele) | Model female and male farmers |
| Participatory Variety Selection of Durum wheat | Five (Bilalo, Tegegnech, Adi, Gume and Burkitu) | 5\*5 | Sinana, Lemo, Endamehoni and Basona Worana | Four (two in each kebele) | Model female and male farmers |
| Participatory Variety Selection of Durum wheat | Five ( Chekol, Alem Tena, Derash, Alemaya and Dembi) | 5\*5 | Sinana, Lemo, Endamehoni and Basona Worana | Four (two in each kebele) | Model female and male farmers |

# Discussion pointes raised through question and answer on CIP, CIAT, and ICARDA/CIMMTY Presentation

**Q1**.Who is responsible to build DLS store, or store house for those seeds which will be produced by the farmers?

**Ans.** DLS is constructed by the farmer cooperative themselves for their own produce and Africa RISING support only carpenter fee.

**Q2**. How to establish the Seed producer cooperatives or strengthening the existing once?

**Ans**. This might be depends on the interest of farmers and the legal issue of the cooperatives of the woreda that stand in a position to help farmers to freely sell their produce without any limitation. It is very important to establish cooperatives and make them legal so that the cooperatives sell their products legally to different institutions when ever need arise.

**Q3**. Africa RISING is doing on community seed multiplication from the beginning. What are the difference between the previously done activities and these new once?

**Ans.** The difference is that: in this case we establish farmers’ cooperatives and seed producer value chain link between producers and those who demand the seed rather than producing seed on individual person which have no sustainability.

***Discussion captured***

 P{{

*Photo 9:**Different photo of the meeting displaying reflection and discussion part in the Afternoon session (Apollo/ILRI)*

**Q4**. Why we are going to introduce new seed producer rather than strengthen the previous cooperative?

**Ans**. Actually, for the easiness of the work and easily achieve sustainability issue.

**Q5**. As so many NGO have done different activities regarding seed production, its sustainability are under question. How could you do M&E to ensure its sustainability?

**Ans**. As far as Africa RISING is there, it has followed and implementing its own M&E system in order to ensure its sustainability and then after, even if it is gone, the activity will be handled by local partners.

**Q6**. In the CIAT Protocol, you haven’t included livestock related intervention as you have suggested different problems to be encountered

**Ans**. We have included Sheep Fattening as I got no clear problem regarding livestock

**Comments and suggestions**.

-Tadele (SARC) - It is good to give emphasis to those varieties released from the SARC rather than those coming from the surrounding research centers and other regions for both Field Pea and Durum Wheat

-Wubshet (SARC) - It is good to mostly depend on those varieties released from SARC rather than fixing ourselves on those varieties like yarer which are lowland types.

-Finally, the projects were accepted with those comments to mix those potential varieties released from SARC together with those brought from other centers.

-FRG establishment will start at PA level other actions will be taken by each and every responsible institutions so that this FRG group should fulfill FRG establishment criteria and grown into seed producer by themselves in the future through the help of Africa RISING and other local partners like AGP.

-As the aims of different stockholders are similar the potential available and demand by farmers is a great input, it is very strong advantage.

-Farmers recommend establishing new seed producer cooperatives but needs to deal on it whether to continue with the already established cooperatives or establishing the new one.

# ICRAF-Africa RISING Protocols

Hadia Seid presented ICRAF protocols to be implemented in Sinana site. She started her presentation in updating activities under taken on apple and its survival rate and the new high value fruit nursery (shed net) established at Shaya government nursery site. She also presented the new protocols integrating sustainable bioenergy and food production for improved rural livelihoods, labor saving and climate resilience in the highlands of Ethiopia. Due to climate change, population growth and increased energy use, it is a need for sustainable, renewable and indigenous energy sources and especially for women, it makes more difficult to collect fuel wood for cooking & girls are often taken out of school to assist the family.

 *Photo 10: Hadiya Seid presenting ICRAF-Africa RISING protocols ((Apollo/ILRI)*

As a result the proposed research (i.e. Integrating MPTS in the form of agroforestry systems as woodlots, border plantations and link with efficient cooking stoves) will solve the above problems and remarkably reduce the burden on rural women’s regarding wood supply need. She also described that it is going to accommodate 25-30 HHs and different seedlings that used for energy, fodder and fertilizer and conservation will be distributed to farmers (like Acacia. decurens, Acacia Abyssinica, Populus,Gliricidia sepium, Acacia melanoxylon, Grevillea robusta etc. ) in order to select multipurpose for fuel wood.

# IWMI and ILRI- Africa RISING protocols

Tessema from IWMI presented on improving agricultural water management in irrigated small holder farms. He presented about four irrigation facilities for sinana site. Among the presented irrigation materials, improved pulley (groundwater), Rope and washer (groundwater), Tractor mounted pumps (groundwater/surface water) and solar pumps (groundwater/surface water) the major materials that was presented on the IP meeting. Tessema presented the importance and use of these materials clearly and what will be expected from farmers’ side and project side as well. It is a good opportunities for small farm household especially female headed households.



Photo 11: Tessema Tamiru presenting IWMI protocols Apollo/ILRI

It was very participative and participant was appreciating the technology and said that it’s a good start to see such easy use and economically feasible, and ecofriendly technologies to improving sustainable agricultural productivity, water use efficiency and water resource allocation.

   Figure *1; Different photos expressing irrigation facilities*

Abera from ILRI also presented livestock feed research. In his presentation he explained that as mixed farming system is a common practice, there should be enough and quality animal feed to get expected product from livestock rearing. However, the reality is reverse and currently livestock are facing shortage of feeding, soil fertility get depletion, lack of wood for various products and low income for small holder farmers are critical challenges in the Africa RISING research sites of the Ethiopian highlands (PCA report, 2013). As result Africa RISING is taking its part in Sinana by introducing and testing multipurpose tree and forage crops to fill the gap identified through three major intervention areas (i.e. Tree Lucerne Research, Supplemental Fodder Development, and Crop Residue Management). In his presentation he touched that Tree Lucerne is a nitrogen fixer species (100 kg N ha-1) and adaptable for use in highland areas (2000-3000 masl). It has potential for use as livestock fodder (leaves with 20-30 % protein with 77-82 % IVDMD), fencing and housing as a component of livestock value chains, used as fertilizer, Soil conservation, wind break and fencing as a component of crop value chains. In addition to this he presented progress made in regarding this, Training has been conducted for farmers and extension agents to be knowledgeable on nursery establishment and management, out-planting, tree management and utilization, survey is being developed to study the relationship of management systems and niches of planting to the performance level of the trees, biomass sampling at different cutting heights to address different uses of the tree (fence, fire wood, feed).



*Photo 11: Abera Adie-ILRI while presenting Forage protocols, Photo Apollo/ILRI*

Beside to this, supplementary fodder development and Crop residue management is also an important part of feeding improvement in order to increase the quality and quantity of feeds, Foster business oriented livestock production system and Improve family income and nutrition through improved livestock feeding. In this regard Africa RISING shows stepwise progress as Men and Women farmers at Illu Sanbitu and Salka volunteered to try Oats/Vetch mixed forage on their back yards and yield measurements indicated that it is possible to harvest over 10 Tons DM development at /ha/harvest of quality forage during the critical feeds shortage time of the year. Also farmers were interviewed perception of the forages and express their happiness with the performance and needs to scale out.

Currently, Africa RISING is going to scale out on interested farmers who provide > 1250m2 of land and > 10 farmers on crop residue management on cost share basis and needs to demonstrate storage design.

# Discussion pointes raised through question and answer on CIP, CIAT ICARDA/CIMMTY presentations

**Q1.** Why we don’t trace on animal genetic improvement?

**Ans.** During intervention the project primarily identified the livestock feed shortage as bottleneck of the farmers’ problems so that focused on that. But in the future we’ll try to incorporate this as one intervention.

**Q2.** Why don’t we use plant specious those adaptive to our area rather than exotic once?

**Ans.** Currently, we are working on this just only to make farmers familiar with the animal feed importance and how he can incorporate with crop-livestock systems. Then after we forcing them to use and grow adopted species from sinana or other areas

**Q3.** Why the project give us the irrigation facilities without any payment at this first round since it is a new technology and we need to test for its applicability? (**Farmers)**

**Q4.** There is Lack of training on the utilization of oat and Vetch

On the second day 1 July 2015, we also had meeting with each protocol owners, woreda IPTGs and DAs, kebele office of agriculture heads, kebele chairman and representative farmers from kebele operational IPs with the objective to discuss on appropriate farmer selection criterion, sharing duties among the IPTGs and fixing planting date for each crops. Productive discussion was made on farmer selection criterion and planting date was fixed for each crops (See Annex 1).

# Annexes

## Annex 1: Participatory Cropping Calendar

|  |  |  |  |
| --- | --- | --- | --- |
| S/N | Types of Crop | Planting dates | |
| **Ilu-Sanbitu Kebele** | **Salka Kebele** |
| 1 | Potato (gudane) | 26 - 30 July | 7 - 16 August |
| 2 | Wheat (Hidase) | 02 - 11 August | 21 August - 05 September |
| 3 | Durum Wheat | 02 - 11 August | 21 August - 05 Septemer |
| 4 | Faba Bean (Gebelcho) | 11 – 16 August | 11 – 16 August |
| 5 | Food Barley (HB1307) | 16 – 21 August | 11 – 16 August |
| 6 | Apple | Mid-August | Mid-August |
| 7 | Tree Lucerne, Accacia decerence, etc | Mid-August | Mid-August |
| 8 | Oat & vetch | 02-11 August | 21 August - 05 September |
| 9 | Lupin (as fodder) | July | July |
| 10 | Lentile | 21 – 26 August | 26 August – 05 September |
| 11 | Field pea | 17 – 22 July | 9 – 14 August |
| 12 | Chickpeas | 21 – 26 August | 26 August – 05 September |

## Annex 2: Agenda for sinana woreda 3nd Strategic IP meeting

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Time | Activity | Presenter | Facilitator | Note taker | Remarks | |
| 2:30-3:00 | Registration |  | Endeshaw | Briefs, Note book and pen with registration | | |
| 3:00 -3:10 | Welcome and brief insight into the Agenda | Addisu Asfaw | Ahmed Aliye | Endeshaw Tadesse, Abdulnasir Yunus, Shure Soboka, and Workalign Asefa | |  |
| 3:10 -3:20 | Opening remarks | Alemu Lema (Bale Zone office of Agriculture V/Head) |
| 3:20 -3:30 | Self-Introduction (Ice-breaker) - All participants will stand up for speed networking | All |
| 3:30-3:50 | Update of Africa RISING project in Sinana | Addisu A. |
| 3:50-4:20 | * Reaching wider communities with stratified land quality based fertilizer recommendation in Ethiopia * Farm typology based interventions for improved nutrition, income and resilience in Africa RISING sites, Ethiopia * Chickpea Interventions for Intensification of Crop-livestock Systems of Ethiopia, Field crops varietal selection and management | Ketema Alemu (ICRISAT) |
| 4:20-4:40 | Discussion on ICRISAT protocols | All |  |
| 4:40-5:00 | Tea/Coffee break and group photo | All | Endashaw |  |
| 5:00-5:40 | * Reducing post-harvest losses and improving nutritional quality of grain staples in Africa RISING sites * Integrated socio-ecological modelling to identify best-fit technologies that promote agricultural system transition to productive and eco-efficient state * Enhancing and monitoring impacts of complementary and linked land and water management technologies and approaches at landscape/ watershed levels * Addressing the yield gap challenge in the Ethiopian highlands through improved management practices | Biyensa/Tesfaye (CIAT) | Ahmed A. |  |
| 5:40-5:55 | Discussion on CIAT protocols | All |  |
| 5:55-6:20 | Identifying potential significant change stories from AR interventions and IP evaluation | Elias and Shure |  |
| 6:20-6:30 | Discussion | All |  |
| 6:20-7:30 | Lunch break | All |  |
| 7:30-7:45 | * Participatory variety selection of Field pea, Durum wheat and Lentil protocol | Yetsdaw A. (ICARDA) |  |
| 7:45-8:00 | * Testing of mechanized options for seeding wheat * Upgrading the bed-and-furrow system for relay cropping, N management, and soil and water conservation | Dereje/Yetsedaw A. |  |
| 8:00-8:15 | * Introducing New bio energy protocol * selecting  led farmers  from both Kebele,  who will be  train on fruit tree and Multipurpose tree  seedling propagation and handling activity * select volunteer farmers  for apple scaling up activity | Hadia Seid (ICRAF) |  |
| 8:15-8:30 | Discussion on ICARDA, CIMMYY and ICRAF protocols | All |  |
| 8:30-8:45 | * Research on decentralized system for community-based seed production and extension provision. * Testing and promotion of appropriate ware storage technology. | Dr. Kalpana Sharma (CIP) |  |  |
| 8:45-9:00 | * Research on irrigation related technologies (Rope and washer pumps, solar pumps, tractor mounted pumps, etc) | Mr. Tesema |  |  |
| 9:00-9:15 | Discussion on CIP and IWMI research protocols | All |  |  |
| 9:15-9:45 | Tea/Coffee break | All |  |  |
| 9:45-10:00 | * Forage related protocols | Abera Adie (ILRI) |  |  |
| 10:00-10:15 | * CIAT crop and livestock value chain works | Edith/Eluid/Dirk |  |  |
| 10:15-10:30 | * Preliminary findings of the adoption and impact study in Bale highlands (pulse crop?) | Dr.Girma/Mulugeta |  |  |
| 10:30-10:45 | * Preliminary results of human nutrition survey in Sinana | Shure Soboka?? |  |  |
| 10:45-11:00 | Discussion | All |  |  |
| 11:00-11:15 | Special Program (donation) | Addisu Asfaw | Ahmed Aliye |  |
| 11:15-11:30 | Closing Remarks | Zone/Woreda/SARC/MWU | Ahmed Aliye |  | |  |

## Annex 2: List of participants of 3nd Strategic IP meeting at Sinana, Bale Robe

| No | Name | Gender | Organization | Role/Responsibility | Phone | E-mail |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Teshome Alemu | M | Selka Bureau of Agriculture DA | DA | 0925389459 |  |
| 2 | Mubarek Shamil | M | Selk- Africa RISISNG representantive | Data collector | 0924575698 |  |
| 3 | Taju Abdulkadir | M | Silka Keble leader & IP memeber | FRG representative, IP member | 0949364277 |  |
| 4 | Mako Abdulmajid | F | Selka keble | FRG representative, IP member |  |  |
| 5 | Urgo Merga | F | Selka Keble | FRG representative, IP member |  |  |
| 6 | Rahel Fikadu | F | Selka Bureau of Agriculture DA | DA | 0922653220 |  |
| 7 | Muhammed Kedir | M | Ilu-Sanbitu Bureau of Agriculture DA | DA | 0915886111 |  |
| 8 | Awel mohummed | M | Selka Bureau of Agriculture DA | DA | 0921111341 |  |
| 9 | Abebe Gonfa | M | Ilu-Sanbitu Bureau of Agriculture DA | DA | 0910683886 |  |
| 10 | Shemsiya Sh/Jamal | F | Ilu-Sanbitu Bureau of Agriculture DA | DA | 0923506966 |  |
| 11 | Kelil H/Muhammed | M | Ilu-Sanbitu keble leader | FRG representative, IP member | 0921358099 |  |
| 12 | Temam Mama | M | Ilu-Sanbitu Africa RISING represent.. | Africa RISING data collector | 0913223284 |  |
| 13 | Chaltu Dessie | F | Ilu-Sanbitu | FRG representative, IP member |  |  |
| 14 | Beleyinesh Tiki | F | Ilu-Sanbitu | FRG representative, IP member | 0932126880 |  |
| 15 | Ahmed H/Hussen | M | Ilu-Sanbitu | FRG representative, IP member |  |  |
| 16 | Abdulkarim A/Manan | M | Selka Bureau of Agriculture DA | DA | 0922773480 |  |
| 17 | Tsehay Amensisa | F | Women & children affairs office | Head and IP member | 0939338286 |  |
| 18 | Aster Adugna | F | Sikomando seed cooperative | Representative of IP members | 0912252431 |  |
| 19 | Workineh Sime | M | Livestock Agency | representative | 0912167040 |  |
| 20 | Eshetu Adugna | M | Livestock Agency | Expert and IP TC | 0912265493 |  |
| 21 | Abdulkadir Hassen | M | Zone Agri. Input team leader | Team leader | 0928004965 |  |
| 22 | Alemu Lema | M | Zone office of Agriculture V/head | Vice head | 0911305147 |  |
| 23 | Amin Abda | M | Micro & small enterprise office | Head | 0912094374 |  |
| 24 | Kemer Kadi | M | FEDO OFFICE | Head | 0912357346 |  |
| 25 | Aschalew Tesfaye | M | Woreda health office | Nutrition focal person | 0911810519 |  |
| 26 | Dechasa Nugussie | M | Woreda irrigation office | Head | 0930257220 |  |
| 27 | Behiru Assefa | M | Woreda Youth and sport | representative | 0920357623 |  |
| 28 | Shemsi Mama | M | Admin | Admin representative | 0912060887 |  |
| 29 | Bekele Megersa | M | Communication office | head | 0923464382 |  |
| 30 | Suleymen Duri | M | Woreda office of Agriculture | Head | 0913540766 |  |
| 31 | Fikadu Sime | M | Woreda OPDO | Head | 0911034946 |  |
| 32 | Worku Dibaba | M | Health office | Head | 0922761307 |  |
| 33 | Abdulmajid Aman | M | Woreda office of Agriculture | Extension | 0926833336 |  |
| 34 | Adane Tefera | M | Woreda office of Agriculture |  | 0911551377 |  |
| 35 | Workalign Assefa | M | Woreda office of Agriculture | Crop expert | 0912255488 |  |
| 36 | Adamu Worku | M | Water and mineral office | Head | 0913342737 |  |
| 37 | Dejene Tesema | M | Zone admin | HRM |  |  |
| 38 | Getachew Worku | M | Irrigation office | Expert | 0913016556 |  |
| 39 | Abdi Muhammed | M | Woreda Cooperative office | cooperative | 0913348950 |  |
| 40 | Tesfaye Geleta | M | Woreda office of Agriculture |  |  |  |
| 41 | Shure Soboka | M | SARC | Researcher & IP TC |  | ibsa@gmail.com |
| 42 | Bekele Diriba | M | SARC | Researcher &IP TC | 0911987783 | diribako@gmail.com |
| 43 | Yonnes Worku | M | SARC | Researcher & IP member | 0911705021 | yonaswork@yahoo.com |
| 44 | Wubshet Alemu | M | SARC | Researcher & IP member | 0913091568 | wubtesema@gmail.com |
| 45 | Aliyi Kadu | M | SARC | researcher | 0913256432 | sadiigooroo@gmail.com |
| 46 | Tadele Tdesse | M | SARC | Researcher & IP member | 0911967286 | Tadeyeko20@gmail.com |
| 47 | Ahmed Aliye | M | MWU | Lecturer & IP TC | 0911075338 | ahmedsare@yahoo.com |
| 48 | Abdulnasir Yunus | M | MWU | Lecturer & IP TC |  | nasruyunus@gmail.com |
| 49 | Dereje Derso | M | MWU | Lecturer & IP Member |  | derejeso@gmail.com |
| 50 | Banje Asefa | M | MWU | Lecturer and representative of RCSDD of MWU | 091341863 |  |
| 51 | Papelon Tura |  | MWU | Lecture |  |  |
| 52 | Ashenafi Mitiku | M | MWU | Lecturer & IP member |  |  |
| 53 | Yetsedaw Ayenew | M | ICARDA | researcher |  | ayeuyesse@gmail.com |
| 54 | Abera Adaie | M | ILRI | researcher |  | a.adie@cgiar.org |
| 55 | Tesema Tamirat | M | IWMI | researcher |  |  |
| 56 | Annah Kimu | F | CIAT | researcher |  | Aim.kimeu@cgiar.org |
| 57 | Ketema Alemu | M | ICRISAT | Research assistance | 0911869922 | ketemalema@gmail.com |
| 58 | Hadia Seid | F | ICRAF | Research assistance | 0913293250 | hadiosseid@yahoo.com |
| 59 | Hussen H/Adem | M | Selka | Farmer &FRG representative |  |  |